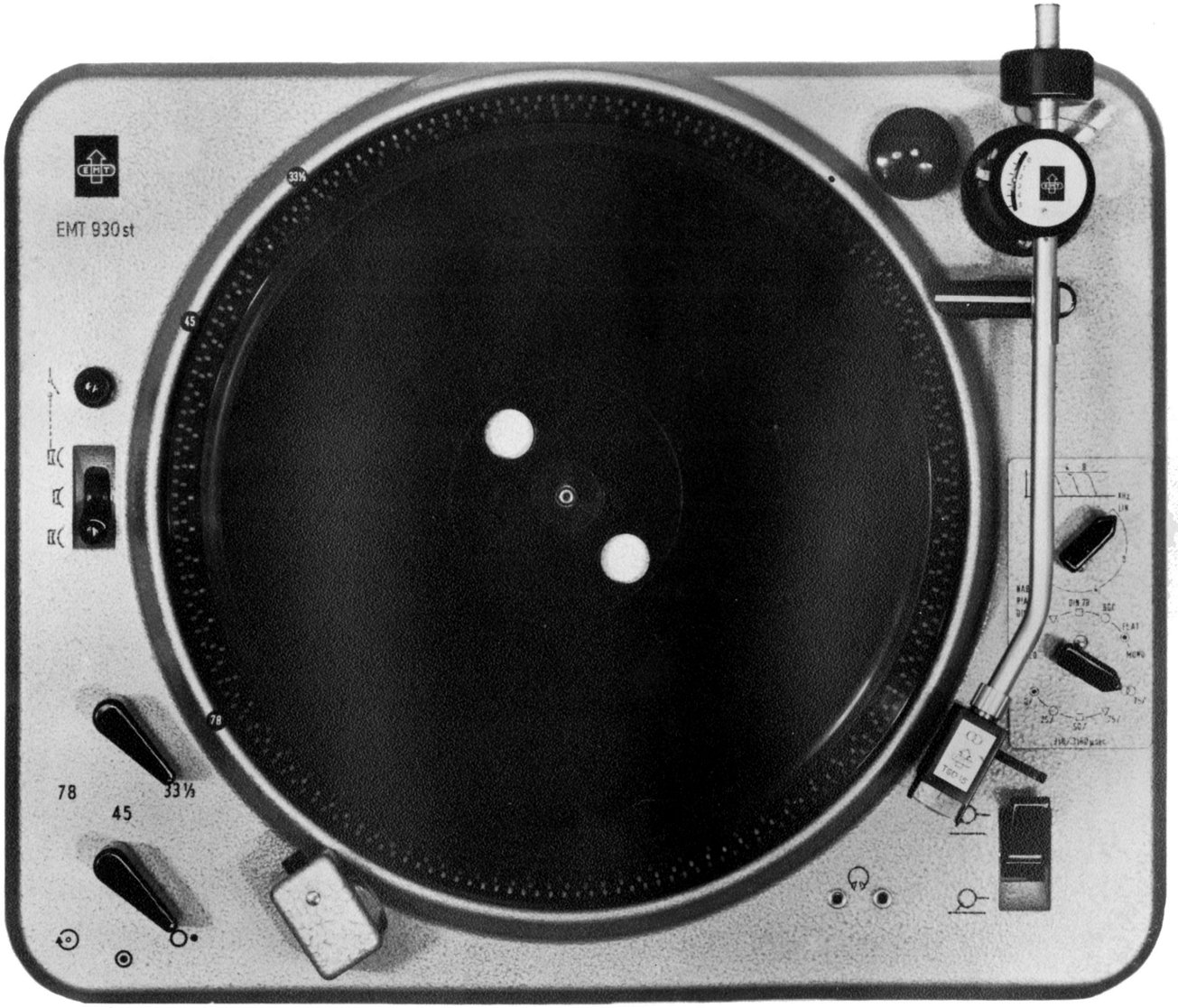
PLANUNGSUNTERLAGEN
PLANNING & INSTALLATION INFORMATION

EMT 930

Studio-Turntable

FRANZ Vertriebsgesellschaft m.b.H.
ELEKTRONIK, MESS- & TONSTUDIOTECHNIK
D-7630 LAHR 1 · POSTFACH 1520



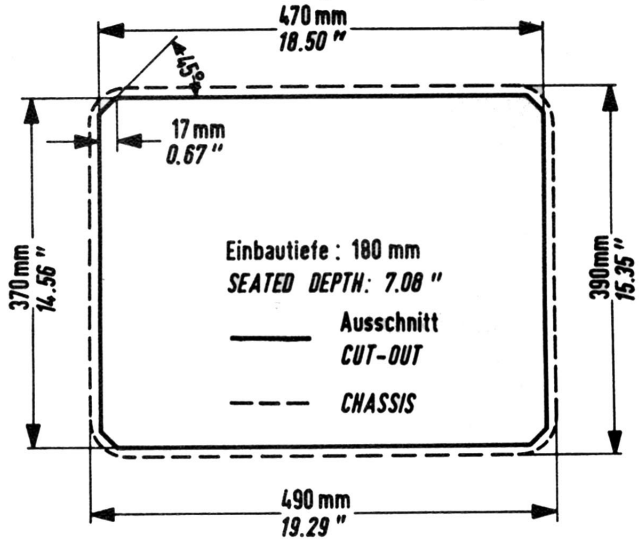
EMT 930

MECHANICAL INSTALLATION

MOUNTING INTO CONSOLES AND TABLES

In order to provide proper operating conditions the professional turntable EMT 930 should be mounted in a console or a table. The machine should be suspended in the cut out only by means of the 4 springy corners, without fixation in any other place. The connection cables should be flexible.

The correct dimensions of the cut out in desks, tables, consoles, etc. are shown in the following drawing:



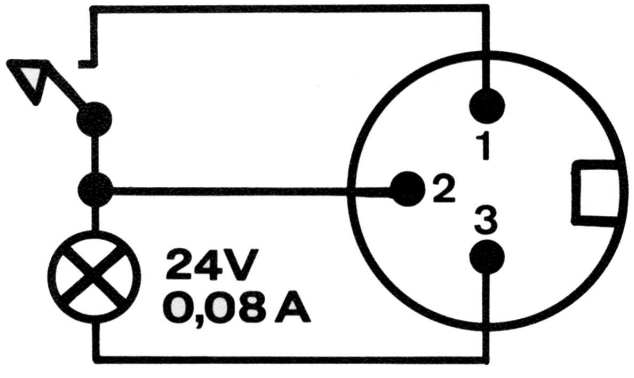
ELECTRICAL CONNECTION

AC MAINS CONNECTION

The EMT professional turntables are set at the factory to the mains voltage and are equipped with motors for the mains frequency quoted in the order. These data are also entered in the test report sheet.

REMOTE START CONNECTION

If the remote start facility is to be used, the remote control connections (3 cores, unscreened) should be soldered onto the supplied 3-pole Tuchel connector (T 3260/1) as follows:



CONNECTING THE SIGNAL OUTPUT LINE (8-pole cable plug)

The EMT professional turntables are equipped with the equalizer amplifier EMT 155 in the mono version and with the equalizer amplifier EMT 155 st in the stereo version.

The output lines (twin screened cable) are connected to the eight-pole cable plug in accordance with the following table (see also overall circuit diagram EMT 930):

Mono

machine equipped with EMT 155

Output	Pin
Core a	4 a
Core b	4 b
Screen (shield)	3 a

Stereo

machine equipped with EMT 155 st

Output left channel	Pin
Core a	4 a
Core b	4 b
Screen (shield)	3 a

Output right channel	Pin
Core a	1 a
Core b	1 b
Screen (shield)	3 a

Connecting the 8-pole cable plug to the machine:

The pins 2 a and 2 b serve for earthing (grounding). If it is desired to earth (ground) the O V (minus) side at a central point of the installation the link between 2 a/2 b and 3 a on the 8-pole connector strip of the machine should be broken (see circuit diagram).

Technical Data

Deck

Turntable diameter	33 cm	
Turntable speeds	78 rpm 45 rpm 33 1/3 rpm	
Accuracy of turntable speed		
78 and 45 rpm (adjusted for 33 1/3 rpm)	max. ± 0.15%	
Run-up time at T_{amb} = 20° C		
Starting with main switch	max. 1 sec.	
Instantaneous start	max. 0.5 sec.	
Wow and flutter at 33 1/3 rpm		
measured with EMT 420 A, weighted in accordance with DIN 45 507 (ANSI S 4.3-1971)	max. ± 0.075%	
Rumble		
referred to a peak velocity $\hat{v}$=10 cm/s at 1 kHz	Mono	Stereo
unweighted	46 dB	44 dB
weighted in accordance with DIN 45 539	64 dB	62 dB
Mains voltages		
50 Hz (special version 60 Hz)	117 V	
	200 V	
	220 V	
	240 V	
Maximum power consumption	approx. 30 W	
Dimensions	490 mm 390 mm 175 mm	
Weight	23 kg (51 lbs)	

Pick-up Cartridges

1. OF series
   (for use with Mono-equalizer-amplifier EMT 155)

Type	EMT OFS 25 EMT OFD 25	EMT OFS 65 EMT OFD 65
Application	Mono micro-grooves	Mono standard grooves
Stylus	Sapphire (OFS 25) Diamond (OFD 25)	Sapphire (OFS 65) Diamond (OFD 65)
Tip radius	25 /um	65 /um
Stylus force	approx. 5 g	approx. 9 g (Pick-up head is 4 g heavier than OF 25!)
Output level at 1 kHz (recorded velocity 1 cm/s)	0.8 mV ±2 dB	0.6 mV ±2 dB
Frequency range	30 Hz - 15 kHz	30 Hz - 15 kHz
Frequency response 40 Hz - 12.5 kHz	±2 dB	±2 dB
Frequency intermodulation	max. 0.5%	max. 0.5%
DC-resistance	approx. 37 ohms	approx. 25 ohms

Note: Stylus assemblies with sapphires are interchangeable.

2. "T" series (stereo and mono)
(for use with stereo equalizer-amplifier EMT 155 st)

Type	TSD 15	TMD 25	TND 65
Application	Stereo Stereo grooves	Mono Micro-grooves	Mono Standard grooves
Stylus	Diamond	Diamond	Diamond
Tip radius	15 /um	25 /um	65 /um
Stylus force	2 - 3 g	2 - 3 g	2 - 3 g
Output level at 1 kHz (for 1 cm/s recorded velocity)	0.15 mV ±2 dB	0.15 mV ±2 dB	0.15 mV ±2 dB
Frequency range	20 Hz - 20 kHz	20 Hz - 20 kHz	20 Hz - 20 kHz
Frequency response 40 Hz - 12.5 kHz	±2 dB	±2 dB	±2 dB
Difference in output level between channels 40 Hz - 12.5 kHz	max. 2 dB	-	-
Cross-talk at 1 kHz	min. 25 dB	-	-

Type	TSD 15	TMD 25	TND 65
Frequency intermodulation (FIM)	max. 0.5%	max. 0.5%	max. 0.5%
Vertical tracking angle	15^{o} ($\pm 2,5^{o}$)	15^{o} ($\pm 2,5^{o}$)	15^{o} ($\pm 2,5^{o}$)
DC-resistance	2 x 24 ohms	24 ohms	24 ohms
Compliance	12×10^{-6} cm/dyn	12×10^{-6} cm/dyn	12×10^{-6} cm/dyn
Equivalent mass at stylus tip	approx. 1 mg	approx. 1 mg	approx. 1 mg

Note: The stylus assemblies are not interchangeable.

The above data were obtained using the following test records:

Frequency response - test records DIN 45 541 and QR 2007 (Mono), QR 2009 (Stereo)

Distortion - test records DIN 45 542 Stereo and DGG 99 011 TM Mono

Distortion measurements correspond with test record DIN 45 542 Stereo with "reference level - 6 dB" full modulation (peak velocity 8 cm/s at 1 kHz) and with test record DGG 99 011 TM Mono track 4: full modulation (peak velocity 12 cm/s at 1 kHz).

Cross-talk - Test record DIN 45 543

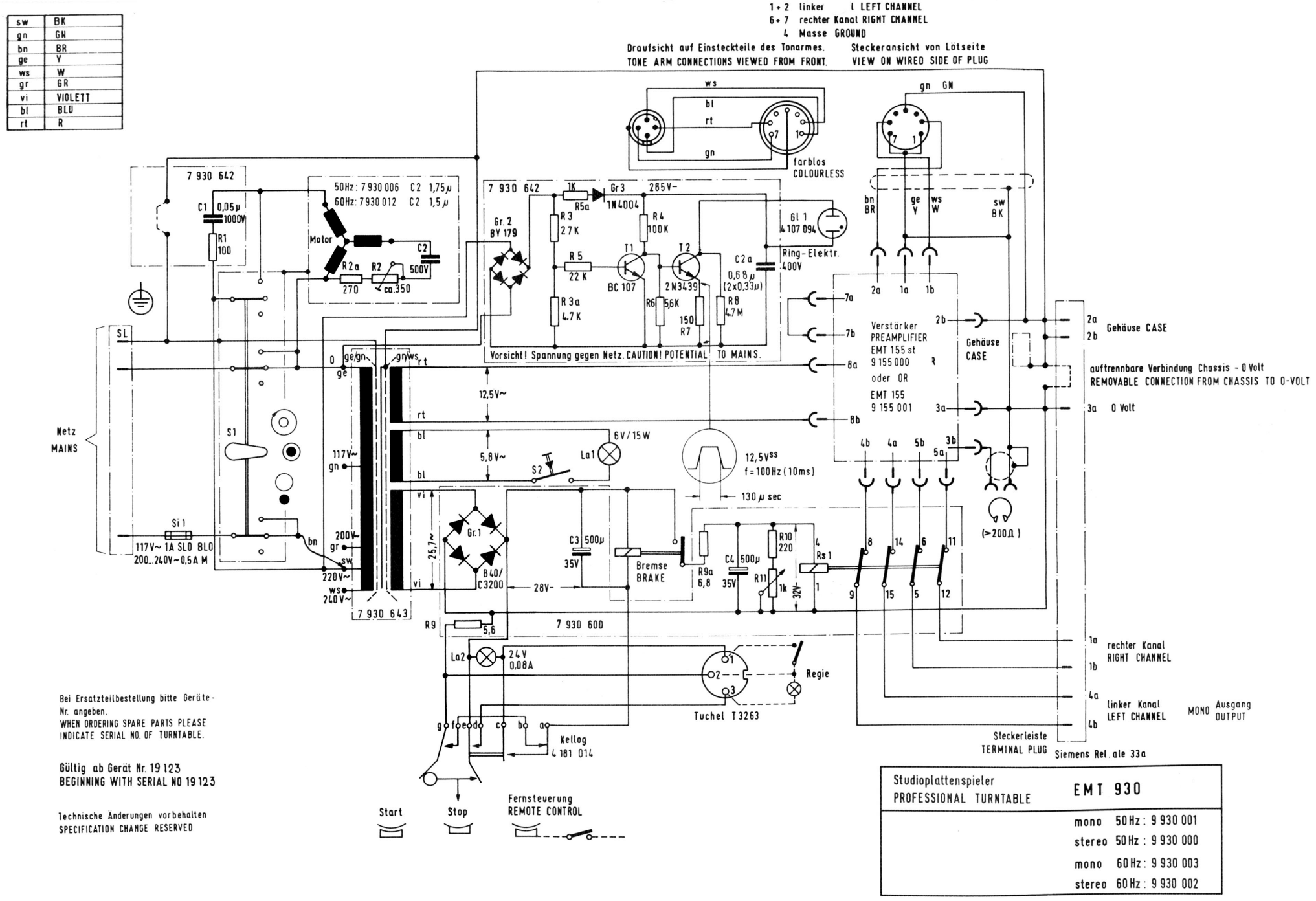
Mono-and Stereo-Equalizer Amplifier EMT155 and EMT155 st

Equalization characteristics	
(can be switched during operation)	
DIN* 45 536/37 NAB, RIAA	75/318/3180 µs mono and stereo
DIN* 45 533	50/318/3180 µs } mono
BBC	25/318/3180 µs } mono
FLAT	0/318/3180 µs } mono
Level variation by switching	less than 1 dB at 1 kHz
Frequency response	
40 Hz to 16 kHz	± 1 dB
at 30 Hz	± 2 dB } minimal damping
at 12 Hz	-10 dB } minimal damping
at 4 Hz	-30 dB } minimal damping
below 4 Hz	descending with 20 dB/octave
Input	balanced, floating
Level EMT 155	10 mV
Level EMT 155st	1 mV
Impedance 30 Hz to 16 kHz	140 to 200 ohms
Impedance of cartridges	max. 40 ohms
Overload capacity referred to 1 mV at 1 kHz	12 dB
Output	
Gain at 1 kHz	75 dB (for T-type cartridges) 55 dB (for OF-type cartridges)
Level matched load impedance	
200 ohms	+ 6 dB (1.55 V) } line level
600 ohms	+12 dB (3.1 V) } line level
600 ohms	+15 dB (4.4 V) } line level
Output level adjustable	from -60 dB to +17.5 dB (600 ohms)
Source impedance 30 Hz to 16 kHz	40 ohms
Harmonic distortion (full load)	
40 Hz	less than .4%
60 Hz	less than .3%
from 200 Hz to 12 kHz	less than .2%

*DIN refers to German standards.

Intermodulation distortion (full load)	less than 1.0%
test frequencies 50 Hz and 4 kHz voltage ratio 4:1	
Overload capacity at 1% distortion and matched load impedance	
200 ohms	+12 dB (3.1 V)
600 ohms	+18 dB (6.2 V)
Signal-to-noise ratio referred to 1.55 V output input matched with 20 ohms	
unweighted (r.m.s.)	better than 60 dB
weighted (peak)	better than 70 dB
Cross-talk figure (EMT 155st)	
from 30 Hz to 16 kHz referred to 4.4 V output	better than 50 dB
Monitoring output for headphones (300 to 400 ohms)	unbalanced
Scratch filter	treble attenuation (10 dB/octave)
cut-off frequencies adjustable	from 2 kHz to 20 kHz
Supply of current	from the power supply of the professional turntables EMT 927 and EMT 930
All technical specifications are guaranteed for the following temperature range	+5° to +50° Celsius
Dimensions	height 3.54" (90 mm) width 4.13" (105 mm) depth 7.87" (200 mm)
Weight	approx. 3.3 lbs (1.5 kg)

All data subject to change without notice.

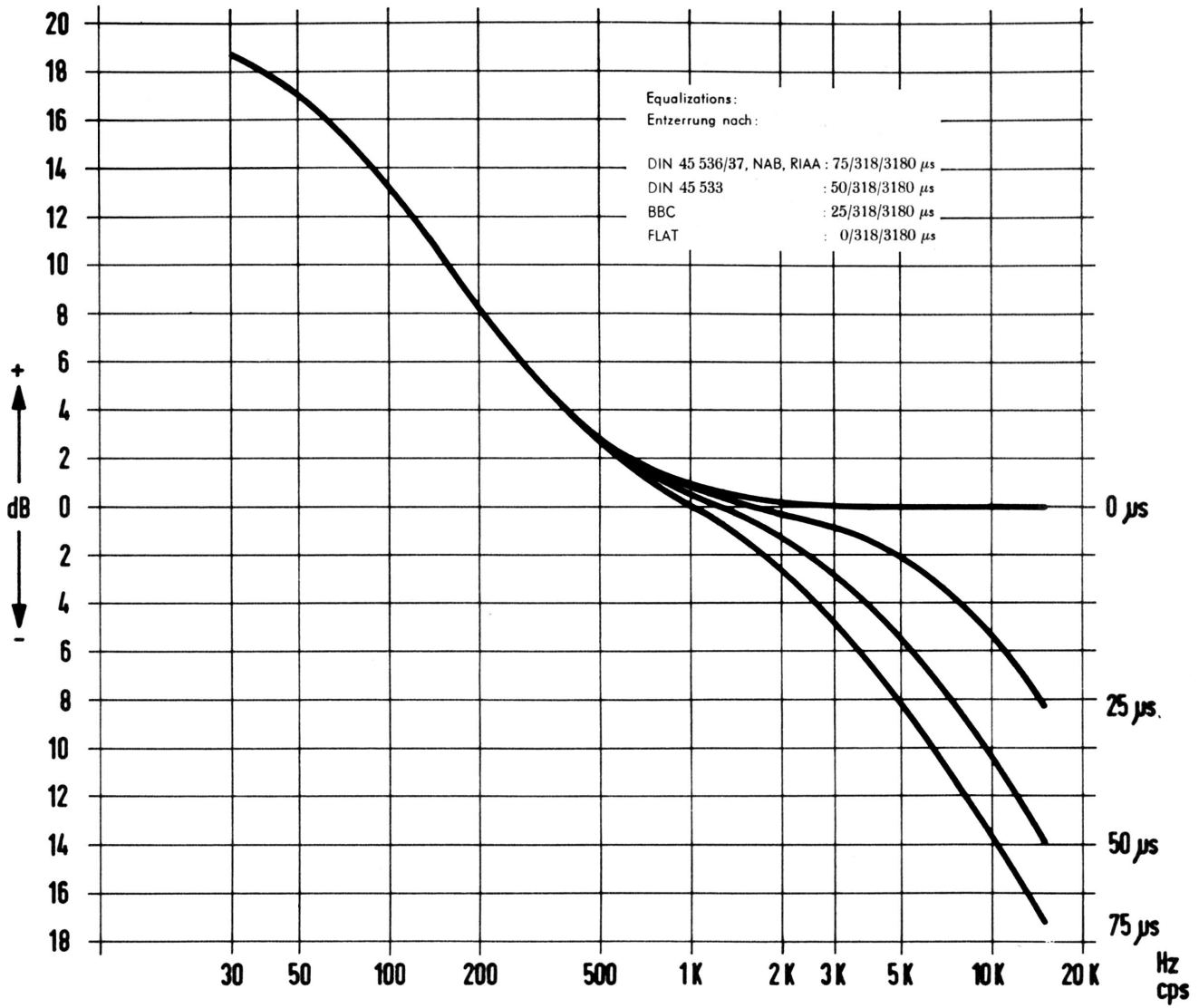


Bei Ersatzteilbestellung bitte Geräte-Nr. angeben.
WHEN ORDERING SPARE PARTS PLEASE INDICATE SERIAL NO. OF TURNTABLE.

Gültig ab Gerät Nr. 19 123
BEGINNING WITH SERIAL NO 19 123

Technische Änderungen vorbehalten
SPECIFICATION CHANGE RESERVED

Studioplattenspieler PROFESSIONAL TURNTABLE	EMT 930
	mono 50 Hz : 9 930 001
	stereo 50 Hz : 9 930 000
	mono 60 Hz : 9 930 003
	stereo 60 Hz : 9 930 002



VALUES IN dB

TABELLENWERTE IN dB

	0 µs	25 µs	50 µs	75 µs
30 Hz	+ 18,6	+ 18,6	+ 18,6	+ 18,6
60 Hz	+ 16,2	+ 16,2	+ 16,2	+ 16,2
200 Hz	+ 8,2	+ 8,2	+ 8,2	+ 8,2
500 Hz	+ 2,7	+ 2,7	+ 2,7	+ 2,7
1 kHz	+ 1,0	+ 0,8	+ 0,5	+ 0
2 kHz	+ 0,2	- 0,4	- 1,3	- 2,6
4 kHZ	0	- 1,4	- 4,2	- 6,6
5 kHz	0	- 2,2	- 5,4	- 8,2
8 kHz	0	- 4,1	- 8,7	- 11,9
10 kHz	0	- 5,4	- 10,5	- 13,8
12 kHz	0	- 6,5	- 11,9	- 15,3
15 kHz	0	- 8,2	- 13,8	- 17,2

Schneidkurven-Entzerrung

Equalizer Characteristics

EMT 155 (st)

INFORMATION FOR ORDERING

Ordering description:

EMT 930 Professional turntable mono, prepared for stereo, turntable diameter 33 cm, chassis construction, turntable speeds 33 1/3, 45 and 78 r.p.m. with transistorized mono equalizer amplifier EMT 155 and one each pickup cartridge (Sapphire) EMT-OFS 25 and OFS 65.

EMT 930st Professional turntable, stereo, turntable diameter 33 cm, chassis construction, turntable speeds: 33 1/3, 45 and 78 r.p.m. with transistorized switchable stereo/mono equalizer amplifier EMT 155st and one stereo pickup cartridge TSD 15.

Standard accessories (supplied with machine):

1 pick-up cartridge TSD 15 (EMT 930 stereo),
1 pick-up cartridge OFS 25 (EMT 930 mono),
1 pick-up cartridge OFS 65 (EMT 930 mono),
1 AC mains cable with plugs,
1 eight-pole cable plug,
1 three-pole Tuchel plug,
1 spare rubber drive pulley with plastic cover,
1 bottle (50cc) of special oil, and small parts

Special accessories (to be ordered separately):

EMT 930-932 H Twin console (steel) for two machines EMT 930 any version, on castors, grey enamelled.

EMT 424 Flutter Analyzer for weighted measurements in accordance with DIN 45 507 and IEC Doc. 60 A 12 and for measuring the tracking-distortion on disks (FIM).

EMT He-16 Single channel, direct recording, rapid pen recorder in a special version for use with the EMT 424.

TMD 25 Pickup cartridge with diamond, tip radius 25 µm, for micro-grooves.

TND 65 Pickup cartridge with diamond, tip radius 65 µm, for standard grooves.

OFD 25 Pickup cartridge with diamond, tip radius 25 µm, for micro-grooves.

OFD 65 Pickup cartridge with diamond, tip radius 65 µm, for standard grooves.

EMT 930-PC Dust Hood (transparent plastic) for EMT 930 all versions.

Packing:

Basic packing:	Styropor in outer carton 70 x 56 x 50 cm (27.5 x 22 x 20") gross weight 25 kg (55 lb) net weight 23 kg (51 lb)
For overseas shipment:	crate with padded corners 92,5 x 77,5 x 66 cm (36.5 x 30.5 x 26") gross weight 65 kg (143.5 lb)

RECOMMENDED SPARE PARTS

The numbers quoted are intended for 5 years operation. Fractions indicate that we recommend one only spare part where several turntables are operated together. Example: 1/3 = 1 spare part for 3 machines.

Description	Part No.	Recommended Quantity
Rubber intermediate wheel	7 927 052	2
Oil felt ring for intermediate wheel	4 312 111	1
Set of contact springs	4 223 006	1
Brake shoe	7 930 097	3
Pilot lamp	4 107 007	1
Auxiliary turntable (Please indicate frequency!)	7 930 237 (50 Hz) 7 930 398 (60 Hz)	1/3
Braking disk with felt ring	7 930 411	2
Motor assembly (Please indicate frequency and serial No.!)	7 930 006 (50 Hz) 7 930 012 (60 Hz)	1/5
Bulb for pick-up illumination	4 107 001	1
Neon bulb for strobe illumination	4 107 014	1/2
Bottle of oil	7 930 690	1
Relais	4 223 038	1/3
Spare pick-up, depending upon the type		2-5
Precision fuse 500 mA German version (220 V) 5Øx20 mm	4 190 005	2
Precision fuse 1 A German version (110 V) 5Øx20 mm	4 190 053	2
Precision fuse 1 A American version (110 V) 1/4" x 1 1/4"	4 190 050	2

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THE EMT927 & EMT930 TURNTABLES

by Heiner Jakobi

The early version of the EMT 927 (remember that in the studios the 927 was named R-80!) had no phono EQ built in and no PS to feed one. An EQ had to be ordered as a separate unit, called the EMT V-133, or V-83 in studios. This was a mono unit. In its early version it used metal tubes and then later the venerable ECC-40, an early kind of 12AU7 but much better and very dear these days!

There was a "measuring version" of the R-80,which has a glass-rubber mat instead of the standard acrylic platter mat.This mat is considered the best,and I agree fully that it is the best choice for the 927. It was later remanufactured in Japan but with a quality standard not quite up to the original. The "measuring version" was called the EMT 927D. The EMT 927A had an optical instrument that showed you the exact position of the cartridge on the record grooves. This was a very useful tool in the studios.

The next generation of the 927 was equipped with an on-board power supply to power the new EMT 139 phono equaliz-

The 927 (R-80)

Introduced in 1951, the EMT 927 was a massive turntable with an aluminum chassis, measuring 67.5 x 52 x 21.5 cm with a weight of 80 pounds. The platter has a diameter of 44 cm and sits in an amazing precision ball bearing. The bearing shaft is 16.6 cm long and has a diameter of 2 cm! The motor itself is massive. It looks like an industrial motor, 13.5 cm in diameter and 20 cm long! It is a 3 phase synchronous type with phase shifter.

A precision manufactured 3-step pulley is mounted on the motor axis and a precision idler transfers the power from the motor to the inside rim of the platter. The idler wheel can be shifted to the 78, 45, and 33 1/3 rpm positions for speed change. The platter itself is extremely heavy and the mass is distributed mainly along the outer rim. A special motor brake allows for fine adjustment of the speed. The massive power supply can be switched for 110/120/220 V inputs.

EMT turntables come with either 50 or 60 hz motors. However, Japanese and Korean EMT fans use separate oscillator power supplies or rely on the braking system (which allows about +/–10% adjustment). Some give the pulley to a precision metal worker to machine it 1mm down in diameter.

The EMT 927

er. For a short time, Pabst motors were tried, but they were not quiet enough so they went back to the old design built by SMB Metalltechnik nearby, the supplier for most of the metal work for EMT.

Mr. Schundenmeier, the former technical head at EMT died in 1997. I last spoke with him in 1996 and he told me of plans to bring the 927 back into production, but sadly this did not happen.

With the introduction of stereo, the new versions of the 927 were labeled 927st with the 139st EQ. The first solid state EQ was named the 155, with a stereo version 155st.

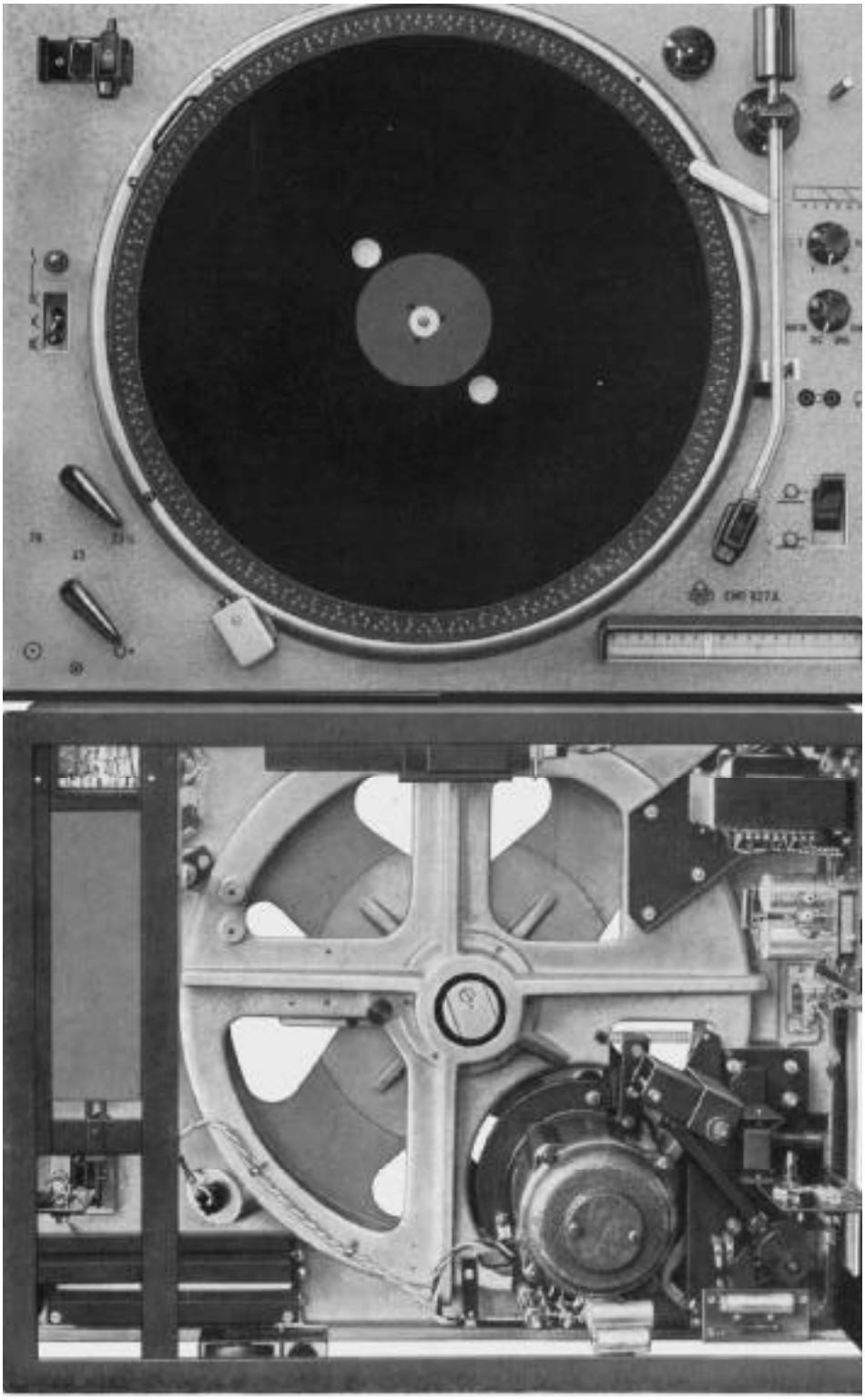
For a long time, the tonearms used on the 927 turntables were made by Ortofon, as well as the cartridges. The early arms were mono, of course. They can be changed to stereo with some inventiveness (and an old 10" Ortofon or EMT studio arm to use for parts). The early 12" Ortofon-made arm was called EMT RF-297, the stereo version RMA-297. Both arms are straight 12"arms and high mass designs, meant for use with Ortofon-EMT, Ortofon,and Neumann studio cartridges. There is no provision for anti-skating since it is not required for tracking forces above 2.2 grams.

These tonearms were reintroduced some years ago, as the demand from Japan was very high. The later EMT-built tonearm, the 997, was a completely different design—lighter, with different bearings, and not S–shaped but curved. It is a matter of taste which of the above-discussed arms are better, since all of them are excellent.

EMT also built a special version of the 927 turntable, the EMT 927S. It is very rare and very sought-after since it had a provision to use a second 12" tonearm on the back. Some people use, very sensibly, the SME-3012A (original) arm as the second tonearm, allowing the use of not only the studio cartridges but ordinary cartridges as well.

It is also possible to buy empty EMT headshells to fit other cartridges, but the advantage in using the 3012A speaks for itself. The 3012A is THE tonearm for the SPU-Gold or the SPU-Meister (Meistro). If no 3012A is available, then I do not recommend the 3012 versions with the plastic bearings. Go for the later versions with the metal bearings. The late model doesn't match the 3012A in sonic qualities, but it is still a very good choice.

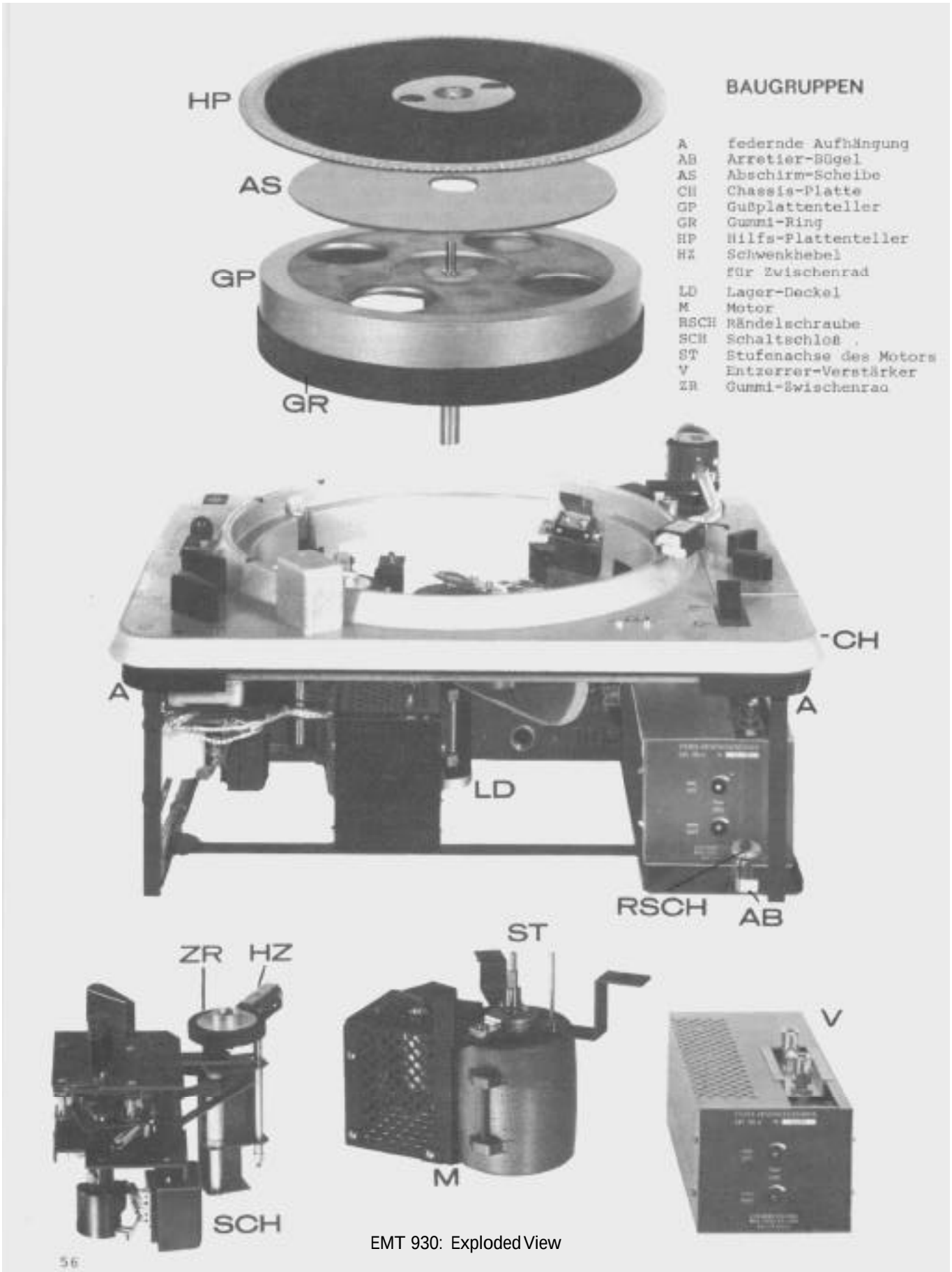
The 927 in all its incarnations is one of the most sought-after turntables in the world.



Authority, authenticity combined with stability—that's how I can describe this Rolls Royce (Mercedes) of all turntables.

The EMT 930

Introduced in 1956, the EMT 930 was not intended to replace the 927, rather it was built to meet the requirement of studios that did not need to work with the big platter of the 927. It had a smaller but very clever chassis made out of bakelite with a 30 cm platter and 10"tonearm.It was built in much larger quantities and is easier to find but nearly as expensive as its bigger brother. It weighs 45 pounds and measures 50 cm x 39cm x 17.5cm. The motor and bearing are a bit smaller than those of the 927, but of similar quality. The 930 motor



EMT 930: Exploded View

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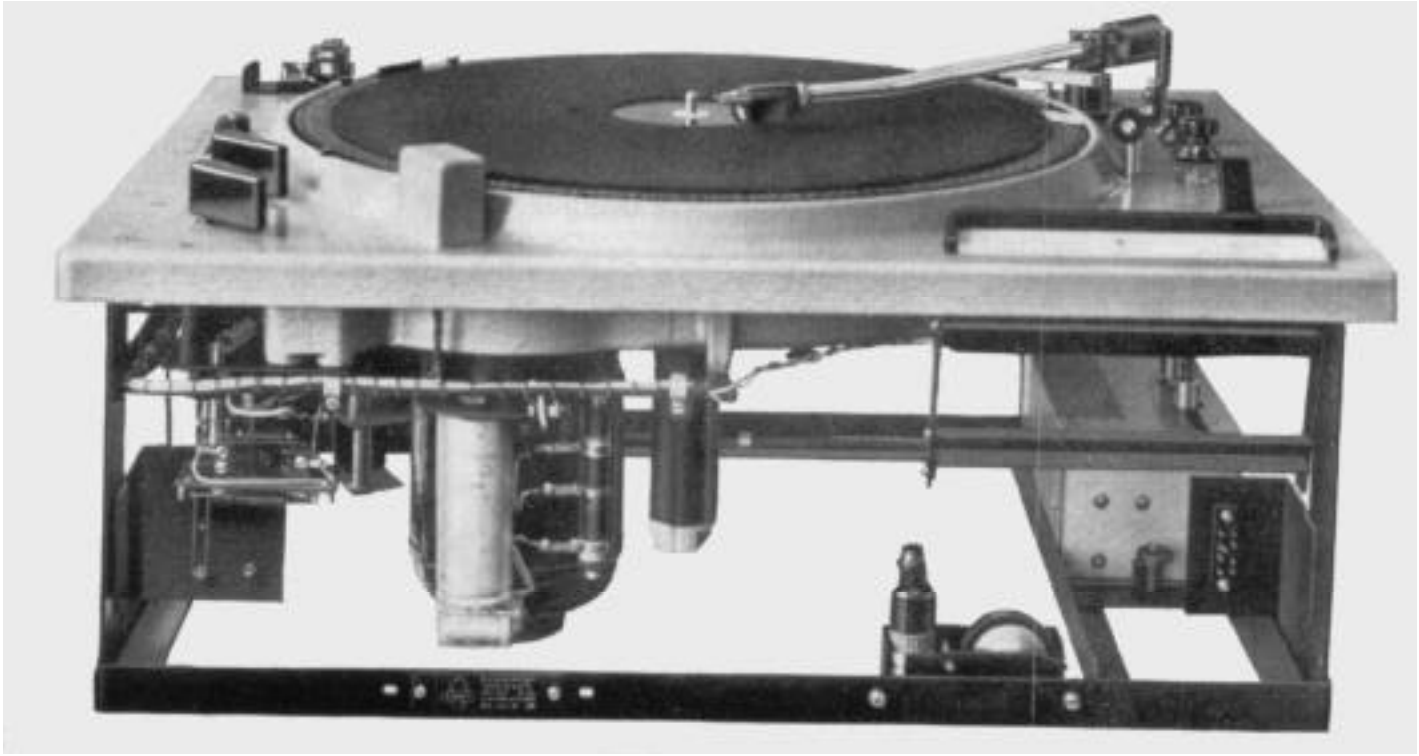


still looks like something out of an industrial vacuum cleaner rather than a turntable. The bakelite chassis is extremely dead, but here I must warn anyone who ever ships a 930 to take the bearing and platter assembly completely off of the turntable. Otherwise, the three arms of the bakelite chassis might break off! If this happens, the only answer is super glue, so this is something to be avoided!

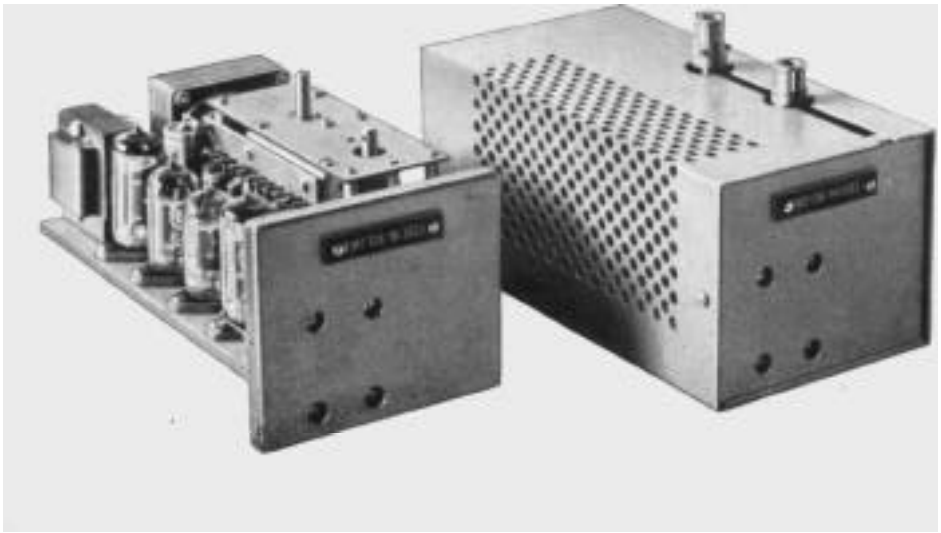
The 930 has one of the best bearings I have ever come across and you can still get spares from EMT! The 930 was equipped with the same phono equalizers as the 927, and here it is time to speak about their quality. They are not all on par with the turntables.

The 139s are very sought after and fetch high prices, but sonically they do not compete with good modern tube designs. The EMT-133/V-83 is the best, if the curve is modified to RIAA. A pair of mono 139As come second, then the 139st. Forget the 155s! The 153s and the Swiss Eymann are better, but still not worth the money. If you find a 927 or 930 with the tube EQ, then sell the EQ. If you find one with a 155 or 153, use the chassis to build your own phono preamp inside. I often used a simple Neumann design with modern parts and first-class Neumann MC transformers (which outperform all transformers I know of) or our own Phonogen design. With the EMT preamps, you cannot even get close to how these tables perform.

The early Ortofon 10" arm was the RF-229 (mono, can be modified to stereo) and the RMA-229 (stereo). The late EMT-made arm is called EMT-929 and is still available. The stereo version of the EMT-930 is the 930st. Most 930s were eventually fitted with a stereo tonearm.

Be careful with the power supplies! If you have the early model for the 139eq, then you can plug in the 155 as well,but if you want to use the 153, then you will have to change the pin layout! Same for the Eymann equalizer, which is pretty rare. But again,these equalizers do not give you the full pleasure you can have with these wonderful turntables.

The 930 sounds very similar to the 927, with a little less authority and a bit more speed. The difference is a matter of taste. Of course, the 927 is more sought-after and worth every penny of its higher price. It is the question of whether you prefer to drive a top Mercedes or a top BMW! A Garrard 301 is a good Austin Minicooper.



EMT139 Mono EQ for the 927 Turntable

The EMT Cartridges and Tonearms

As mentioned before, the first EMT cartridges were all built by Ortofon. In German,they are called "Tondosen", i.e. "heads," because they are built into a headshell ready to be plugged into the arm.There is no need for alignment—the correct overhang and angle is given automatically! We have the OF-series and the T-series. The O-series are all mono heads.

When EMT started to manufacture their own cartridges, they kept the same names as when they were built by Ortofon. However, they changed from bakelite to a special magnesium alloy for the headshell material. For 78s, it is recommended to use the sapphire tip because it sounds much better. It doesn't last as long as the diamond tip, but it is much cheaper.

There are several other very famous cartridges built by EMT listed in the table to right. Also turntables: The Thorens TD-125 was built for Thorens by EMT. The EMT-928 is a modified TD-125, but these are not at all comparable with the 927 and 930 units. It would be better to go for a Garrard 301/401 with a SME 3012A or FR-64s.

TYPE	TIP	RECORDS	TRACKING
OF-25	sapphire 25	monomicrogroove	5 gr
OFD-25	diamond 25	monomicrogroove	5 gr
OFS-65	sapphire 65	78s	9 gr
OFD-65	diamond 65	78s	9 gr
TSD-12	diamond 12	stereo	2-3 gr
TSD-15	diamond 15	stereo	2-3 gr
TMD-25	diamond 25	monomicrogroove	2-3 gr
TND-65	diamond 65	78s	2-3 gr

Other Cartridges manufactured by EMT

v.d.Hul MC-1a/b	No longer available
Roksan Shiraz	EMT TSD-15 in Roksan body
Tubafon TU-2	Naked TSD-15
Tubafon TU-2S EMT	Special version of TU-2, the best available and one of the world's best cartridges for a good price
Thorens TMC-63	Head/armtube only for Thorens TP-16 mkIII
Thorens MCH-63	Head/armtube only for Thorens TP-16
Thorens MCH-1/2	90% of a TSD-15, but with a softer suspension for Thorens/EMT tonearm

The EMT-Ortofon arm for the EMT 927 shown with arm lift mechanism

Other tonearms that work well on the EMT-927:
SME-3012A, Stax UA-70N and 90N, FR-66s, Ortofon RMG-309
For the EMT-930:
Ortofon RMG-212, Stax UA-7N/cfN, FR-64s—but not the so-called FR-64 shown in SP# 5,page 18!! Please since this is an Audio Technica AT-1503,a very cheap arm,not a FR-64!! The AT-1503 may be OK for a Garrard,but the FR-64 is of a different class.

When purchasing a used arm, it is always wise to check the bearing quality. If the bearings are no good,then you will only get 20% of what is possible! The EMT tonearms will only allow the use of studio cartridges from EMT, Neumann, or Ortofon. However, you can use an empty head to install any cartridge.

If you wish to go for a different tonearm, then the Fidelity Research is the best choice for the 930. You will have to raise the bearing a bit (easily done), otherwise you can't adjust the height of the tonearm as well.

For the 927, go for the FR-66s, the EMT 3012A, or any 3012 with metal bearings. But remember...the old Ortofon arms are being reissued for Japan and sell for high prices there—and there is a good reason for this! The Ortofon heads are wonderful also— as are the EMTs!

Installation

There is an EMT shock absorber frame, the EMT-900, which was designed for the EMT 930.This heavy unit decouples the EMT from any acoustic feedback and resonates at about 7.5 hz. It was designed by Mr. Schundenmeier, and it is still available since an ex-employee of SMB-Metalltechnik started to manufacture them again.The author can offer them at a price of $1500, which is the price EMT charged for them back in the 80s! The 927 never had a shock absorber frame but it is available now for $2000. These frames completely isolate the turntables from vibrations and they are very heavy and built in a sophisticated way. If no isolation is needed, i.e. good floors and stands, then a good console (Studer made very good ones) or homemade console will do with no problems.

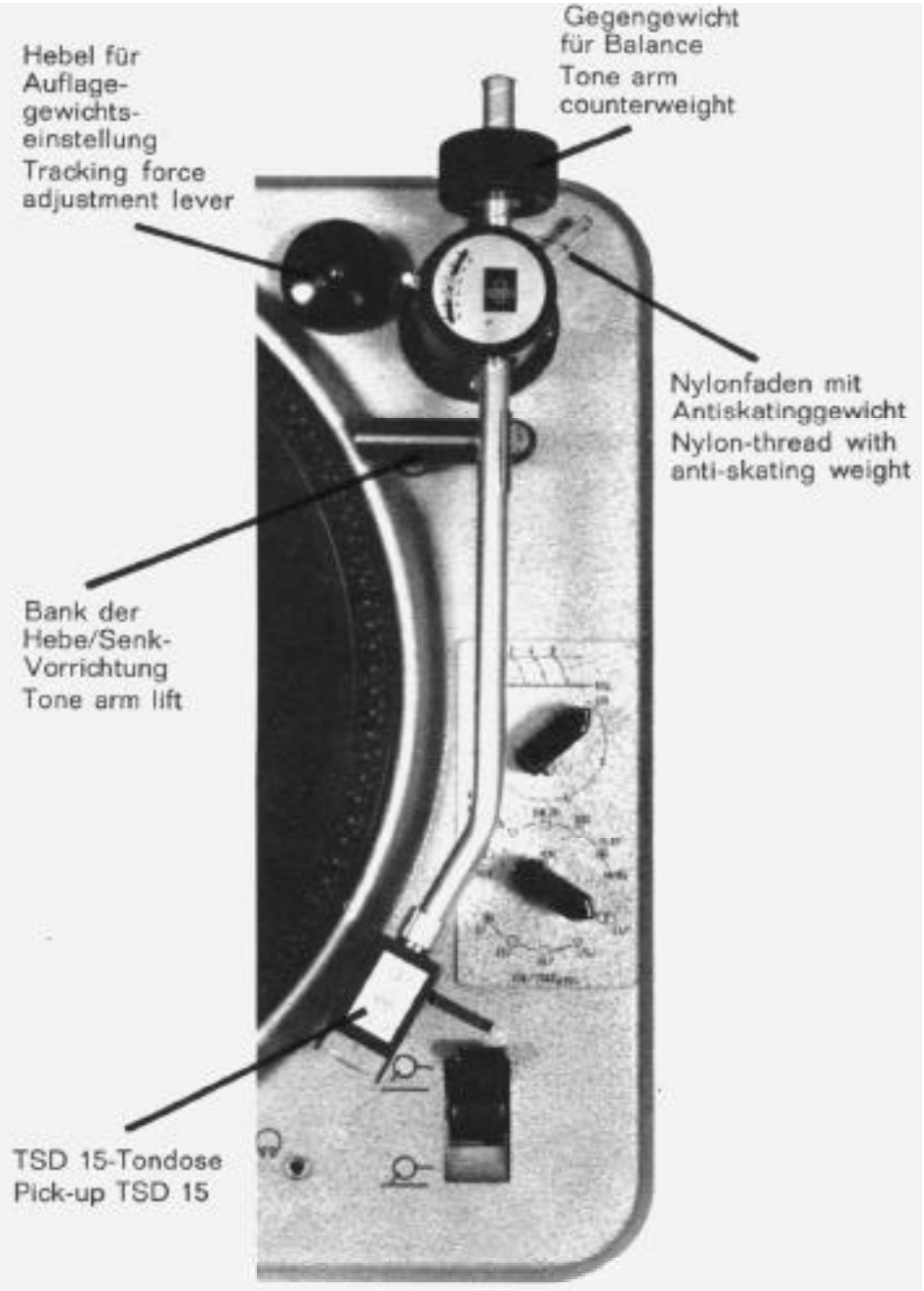
A homemade console should be constructed with marine grade plywood with a 25.4" x 20.5" cutout for the 927 and 18.5" x 15.35" for the 927. Make sure the 930 sits on the rubber pieces supplied. If they are missing, use round rubber with a diameter of about 7mm between the underside of the chassis and the console. A very useful support for a small custom-made console is the Seismic Sink by Townshend Audio. Never place the 927/930s on the metal frame. It must be sunk into a console or similar setup, or else it will not sound good!

Service of the EMT turntables

All EMT studio turntables are built to run 24 hours a day, 7 days a week, 365 days a year. EMTs service instructions are based on this kind of continuous use. For the normal user, it is necessary to oil the motor and idler bearings every year, and to change the oil and clean the main bearing every 5 years. EMT oil is still available. Of utmost importance is to align the motor, the idler, and the bearing so that they are all parallel in their axis. EMT sold special tools to make this easier, but they are not available anymore, but it is possible to do without them.

Modifications

I only recommend two modifications. First, I do not like the fine speed adjustment and I removed it from my 930, resulting in more subjective clarity and "speed"—same rpm,of course! Then,I do not like the original platter mat. This unit only serves two functions: to read accurate speed with the built-in stroboscope and to stop the record immediately with the platter brake for studio use. This is not usually necessary at home.



EMT 929 arm on 930 turntable fitted with a TSD15 tonehead

I had best results with an acrylic mat from Sumiko made with a sandwich construction. Both work extremely well and I am sure that some experimenting would bring desired results. I wish somebody would produce a teflon mat like the one on the Well Tempered Signature! If the tonearm sits too high due to removal of the stock mat,then just raise the main bearing. There is 1cm of adjustment available and no disadvantage in doing this. The same goes for the EMT 927 but there the "measuring" glass rubber mat is the best choice. I tried a pure glass mat once but this was terrible. A simple felt mat is not enough.This is not a Linn or whatever baby turntable.

And, lastly, there are more modern designs built by EMT, but they are direct drive and I never heard one yet that satisfied me! I would prefer a nice modern heavy mass turntable. The good thing about EMT is that you do not lose money! The keep their value or climb up like old WE or McIntosh gear and they are built for a lifetime!